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# **Users' Participation in Facebook Brand Pages and its influence on Word-of-Mouth: the role of brand knowledge and brand relationship**

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## **Abstract**

Due to the development of social media, brands have integrated Social Networking Sites (SNS) as an important part of their communication mix. This change calls for studies that help to understand the role of SNS in the communication mix, through further investigating their effects for brands and acknowledging their influencing triggers. Concerning that, previous studies have associated the use of SNS to effects on WoM, with SNS contributing as a tool skilled for generating conversations about the brand. The current study focuses on investigating the triggers of these effects. In previous research, WoM was accepted as being triggered by constructs related to the effects of SNS on increasing users' knowledge about the brand and improving perceived relationship value. Despite their relevance, studies in SNS so far have not yet explored these approaches in an integrative manner. So researchers and managers could understand how these dimensions behave in relation to each other in triggering WoM. The current study addresses this research gap, proposing an integrative perspective that combines brand knowledge and brand relationship constructs while investigating the effects on WoM. Direct and indirect effects are proposed with mediating relations being supported by the Theory of Reason Action (TRA) and Social Exchange (SET). Two surveys were implemented, with 218 and 550 valid responses obtained. Results were analyzed using structural equation modeling. Findings support the relevance of brand relationship variables (trust and affective commitment) in influencing WoM, with trust assuming a pivotal role. Moreover, triggers related to brand knowledge also influence the effects, with brand awareness and attitude driving significant effects. Managerial and theoretical implications are discussed.

**Keywords:** Social Media; Word-of-Mouth (WoM), Brand Knowledge; Brand Relationship;

## Introduction

Social Networking Sites (SNS) have developed into an important part of the internet experience, with platforms like Facebook and Instagram accounting for more than 50 percent of the total online population worldwide (Internet Worldwide Statistics, 2019; Statista, 2019). In these platforms, brands communicate with their audiences by means of *brand pages* (BP), where they regularly post brand related content and interact with their audiences.

Previous studies have associated brand efforts in SNS to positive outcomes related to firms' performance, with effects on aspects like word-of-mouth intentions (WoM), purchase intentions, overall brand equity and brand engagement (Schivinski and Dabrowski, 2015, 2016; Schivinsky, Langaro and Shaw, 2019). In the current study, the focus is placed on word-of-mouth. WoM is defined as the process through which informal, and non-commercially intended information is exchanged between a communicator and a receiver about a brand, service or organization (Harrison-Walker, 2001; Laroche *et al.*, 2012). In SNS, understanding the triggers of WoM is of crucial interest as in these platforms users can more easily broadcast their views and ask for each other's opinions (Hornikx and Hendriks, 2015; Sharma and Srivastava, 2017; Kaplan, 2010; Kimmel and Kitchen, 2013), with potential impact on firms' performance.

Regarding that, previous studies associate WoM to mechanisms related to the effects of brand communications on improving users' relationship with the brand (Hennig-Thurau *et al.*, 2010) and their knowledge (Schivinski and Dabrowski, 2015 and 2016; Schivinsky, Langaro and Shaw, 2019; Sharma and Srivastava, 2017). Despite the relevance of findings, there is still missing an integrative perspective that evaluates these dimensions simultaneously and allows a more in-depth understanding regarding their effects. The current study intends to address this research gap. It envisions to explore how does SNS impacts WoM, integrating into the analysis the effects of brand communications on variables related to brand relationship and brand knowledge.

This integrative perspective is of special interest in the context of SNS, as users are impacted by brand activities targeted at simultaneously fostering consumers' brand knowledge and brand relationship.

Direct and indirect effects are proposed, with mediating relations supported by the Theory of Reasoned Action (TRA) and Social Exchange (SET). TRA states that when individuals try to anticipate behaviors, they are likely to consider all the elements that they are aware of concerning the brand, including their attitudes (Sheppard et al., 1988). As brand awareness and brand attitudes are influenced by brand communications (Schivinski and Dabrowski, 2015 and 2016; Schivinsky, Langaro and Shaw, 2019), the current study proposes that in the context of SNS, the effects of users' brand page participation (BPP) on WoM intentions are mediated by consumers' brand awareness and attitude. The principles of SET, on the other hand, suggest that WoM occurs as consumers reciprocate for the relationship value they perceive (de Matos and Rossi, 2008; Bagozzi, 1974). As the brand relationship is influenced by brand communications (Laroche et al., 2012), in the current research it is proposed that the effects of BPP on WoM are mediated by the effects on users' trust and affective commitment regarding the brand, two of most relevant relationship constructs (Garbarino and Johnson, 1999).

In sum, the present study intends to understand how the combined perspectives of brand relationships and brand knowledge contribute to influencing WoM among users who are exposed to brand communications in SNS and participate in brand pages. For that, constructs of brand page participation (BPP), brand awareness, brand attitude, brand trust, affective commitment, and WoM are integrated into a comprehensive model and analyzed for their structural relations with direct and indirect relations being inspected.

In order to address the research questions, a literature review was developed, hypotheses were proposed and analyzed for their results based on data obtained using two online surveys.

The findings are expected to contribute to the literature on SNS by offering a clear and integrative understanding concerning how the effects of SNS on firms' performance occur.

## **Conceptual Background and Hypotheses Development**

In *Facebook*, brands offer utilitarian and hedonic value for acquiring new users (Muk and Chung, 2014) and captivating their participation in brand pages. Users' brand page participation (BPP) takes place by means of consuming content that is shared (e.g. reading posts), contributing with opinions (e.g. liking and commenting posts) and creating new content (e.g. sharing posts with their own network of friends) (Muntinga *et al.*, 2011;

Schiwinski et al, 2016). Thus, our study assumes the perspective that users who participate in brand pages represent the audience who is exposed to brand communications (Wang et al, 2012; Chu and Kim, 2011; de Bruyn and Lilien, 2008), being, therefore, the one considered for the expected effects on WoM.

### ***-Users' participation in Facebook Brand Pages, Brand Knowledge and WoM***

Based on literature in brand management, brand knowledge has many dimensions, namely (e.g., Keller, 1993, 2003): awareness, attributes, benefits, images, thoughts, feelings, attitudes and experiences. Among these, brand awareness and attitude are central concepts. The pivotal role of brand attitudes is related to their synthetic and abstract nature, allowing information to be stored and more easily retrieved from memory than the attributes and benefits that underlie them (Keller, 2013). Moreover, the relevance of brand awareness is associated to the fact that it captures the availability of a brand in the mind of the consumer, being created through consumer's repeated and memorable exposure to brand elements, as for example, the name, slogan, logotype or packaging (Keller, 1993 and 2003).

In SNS, most users who join *Facebook brand pages* have some previous brand experiences (Nelson-Field, Riebe and Sharp, 2012). As these users participate, they have more chances to be exposed to the brand name or logo and other contents that are brand-related. This increased frequency and scope of consumer-brand contacts are expected to affect brand awareness (Macdonald and Sharp, 2000; Buil, Chernatony and Martinez, 2013; Graham and Havlena, 2007; Niederhoffer et al., 2007). Previous studies in Facebook brand pages have supported these effects (Bruhn et al, 2012; Langaro et al, 2015; Schivinski and Dabrowski, 2015; Schivinski, Christodoulides, and Dabrowski, 2016).

Moreover, previous studies acknowledge that consumers tend to recommend the brands they can retrieve from memory (Macdonald and Sharp, 2000; Niederhoffer et al, 2007). Thus, it is expected that as users' brand awareness is impacted through their brand page participation (BPP) in Facebook, the intentions to recommend the brand are also influenced (Langaro et al, 2015). The following hypotheses postulate these relations:

**H1:** Brand page participation in Facebook has a positive and direct effect on brand awareness.

**H2:** Brand awareness has a positive and direct influence on WoM intentions.

Users who participate in *Facebook brand pages* are exposed to brand-related information regarding the product portfolio, related attributes, and benefits (Schivinski and Dabrowski, 2015). Specifically, this information can be textual and pictorial (e.g., Naylor et al., 2012) and can be posted by the firm or by other users of the Facebook brand page (e.g., Naylor et al., 2012). This exposure contributes to creating over time functional, emotional, social, epistemic brand associations in the consumers' minds. Keller (2003, p. 596) uses the term *brand attitude* to refer to the summary of judgments and overall evaluations derived from these brand-related associations (Keller, 2003, p. 596). Therefore, it is expected that users' participation in *Facebook brand pages* positively influences brand attitude.

Else, social psychological theories (Fishbein and Ajzen, 1975; Ajzen, 1985) postulate that attitudes affect behavioral intentions. Based on this strand of research and also on brand-related marketing literature, brand attitude can be recognized as being able to influence the intention to recommend the brand to others (e.g., Mazzarol et al., 2007). Thus, we propose the following hypotheses:

**H3:** Brand page participation in Facebook has a positive and direct impact on brand attitude.

**H4:** Brand attitude has a positive and direct impact on WoM intentions.

It is widely accepted that brand awareness is a necessary condition for developing an attitude (Keller, 2003). Brand awareness influences brand attitudes in two ways. First, it elicits a greater sense of familiarity and warmth towards the brand, thus influencing users' evaluations (Hoyen and Brown 1990). Second, the fact of being aware of the brand activates the users' memory, and affects brand associations, reinforcing the strength of linkages and attitudes (Keller, 1993). Hence, in the context of Facebook brand pages, we propose the following hypothesis:

**H5:** Brand awareness has a positive and direct impact on brand attitude.

## ***- Users participation in Facebook Brand Pages, Brand relationship and WoM***

In the literature, it is widely accepted that consumers and brands can relate to each other, which is usually referred to as brand relationship (Fournier, 1998). The augmented brand experience associated with users' brand page participation (BPP) in Facebook sets the ground for consumer-brand relationships to evolve. In brand pages, users enjoy unique social, emotional and functional value associated with their participation (Jahn and Kunz, 2012; Fueller et al., 2012), experience the brands through more humanized lenses and get involved in co-authoring brand stories (Gensler et al., 2013).

Hence, it is reasonable to propose that the more users participate in brand pages, the more value they receive, and the higher will be their intentions to offer WoM in return. These effects build on the principle of mutual reciprocity, which implies that consumers who perceive positive rewards from brands, return good for good (Bagozzi, 1974).

Several dimensions influence the *returning* effects, among which are brands' ability to ground consumer-brand exchanges on strengthening brand trust and affective commitment (de Matos and Rossi, 2008; Smit et al., 2007).

In online contexts, trust is accepted as an important enabler that influences people's online behavior (Urban et al., 2009; Eastlick, et al., 2006). Trust can be defined as the belief in the trustworthiness of the partner and the willingness to rely on him/her in a situation of vulnerability (Shankar, et al., 2002). Previous research has shown that online channels exhibit their trustworthiness in a variety of ways depending on the content (Gefen et al., 2008). According to Sirdeshmukh et al. (2002), credibility and benevolence are the two main dimensions of trust (Sirdeshmukh et al., 2002). Credibility refers to consumers' beliefs that sellers can deliver their promises effectively and reliably. Benevolence refers to consumers' beliefs on sellers' good intentions towards privileging consumers' interests in a situation of vulnerability (Shankar et al., 2002).

Our study proposes that trust is affected by users' participation (Dholakia and Algesheimer, 2009), with this effect being influenced by the extended exposure to brand-related information with an impact on reducing uncertainties and information asymmetries, increasing brand social presence and perceptions towards brand benevolence.

As proposed by Hudson *et al.*, (2016) while interacting with the *Facebook Brand Page*, users can gather more information that can help to address uncertainties and information asymmetry between parties (Schau et al., 2009; Lewicky and Bunker, 1995; Porter and Donthu, 2008), which in turn makes the brand page more credible and trustworthy (Ba, 2001). Moreover, positive effects are also expected to evolve as brands position themselves as knowledgeable entities in their *Facebook brand pages*, sharing information, giving advice and guiding best practices regarding the product category (Shankar et al., 2002).

Second, the repeated interactions that take place are expected to increase brands' social presence, with community managers voicing the brand and customizing interactions which, in turn, influence consumers' level of trust (Beldad et al., 2010).

Third, *Facebook Brand Pages* offer entertainment, information, and rewards (Jahn and Kunz, 2012; Sung, 2010) with no monetary costs being charged to consumers. These initiatives may trigger a sense of brand altruism and reciprocity, with an impact on users' perceptions towards brands' benevolence (Bhattacharjee, 2002). All that said, we propose the following hypothesis:

Furthermore, based on previous literature, it can be argued that the intention to recommend a brand is higher when consumers trust more the brand and the information it delivers (Sirdeshmukh et al., 2002; Garbarino and Johnson, 1999). This could be explained by arguing that, under these circumstances, consumers do not perceive to be risking their reputation in recommending a brand (Mazzarol et al., 2007). Thus, the following hypotheses are proposed:

**H6:** Brand page participation in Facebook has a positive impact on brand trust.

**H7:** Brand trust has a positive impact on WoM intentions.

Brand affective commitment occurs when the *Facebook Brand Page* is able to provide meaning to the person who engages with it (Smit et al., 2007). Specifically, it implies that users feel positively motivated to keep relationships with brands that they feel emotionally attached to and identified with (Allen and Meyer, 1990; Fullerton, 2005). Consumers' identification with the brand derives from the fulfillment of consumers' self-identity needs, which occur when consumers enjoy borrowed brand meanings (Bhattacharya and Sen, 2003). Emotional attachment refers to feelings of 'joy' and 'love'

towards brands, which bind consumers through affect nurturing (Bergamini and Bagozzi, 2000).

Previous studies in the context of traditional online brand communities argued that the interactions among community members are predominantly positive, being expected to influence users' identification and emotional attachment with the brand (Casaló et al., 2008; Algesheimer, Dholakia and Herrmann, 2005; Naylor et al., 2012; Fueller et al., 2012).

Furthermore, in the specific context of *Facebook Brand Pages*, identification and emotional attachment are also expected to be influenced by users' experiences towards more humanized brand personalities (Gensler et al., 2013; Hudson et al., 2016; Fournier, 1998; Malhotra et al., 2013). In *Facebook Brand Pages* the community managers approach consumers directly and at a personal level, facilitating meaningful interactions and sustaining the brand relationship with users. According to Hudson et al. (2016, p. 29) "when the brand interacts with followers by replying to comments, solving problems and inviting participation, consumers generate a feeling of connection and thus experience a higher level of relationship quality... and foster an emotional attachment and feeling of intimacy".

Moreover, every time users co-author brand content (e.g., *liking* a post, writing a *comment* and/or *sharing* it) the brand meanings are reinterpreted through their lenses (Kozinets et al., 2010). Hence, users get actively involved in building joined brand identities (Shao, 2009), increasing the extent to which they can identify themselves with the brand and/or feel emotionally attached towards it (Shao, 2009).

Moreover, existing studies found that affective commitment is positively related to word-of-mouth activities (Harrison-Walker, 2001). Previous research confirms that this relationship also exists in the specific context of online brand communities (Cheung and Lee, 2009; Royo-Vela and Casamassima, 2011). Two reasons help to justify these effects. Firstly, consumers tend to support the brands they like, offering positive recommendations (de Matos and Rossi, 2008). Secondly, WoM is often offered as a mechanism of self-enhancement, with consumers expressing themselves through the brands they support (Brown et al., 2005; Wallace et al., 2012). Thus, the following hypotheses are proposed:

**H8:** Brand page participation in Facebook has a positive impact on brand affective commitment.

**H9:** Brand affective commitment positively and directly influences the intention to recommend the brand

Also, several studies devoted to relationship marketing highlight that brand trust is one of the significant determinants of consumers' commitment towards a brand (e.g., Morgan and Hunt, 1994; Garbarino and Johnson, 1999). Despite that this idea is widely accepted in relationship marketing literature, the impact of brand trust on brand affective commitment has not yet been investigated in the specific context of *Facebook Brand Pages*. Hence, the following hypothesis is formulated:

**H10:** Brand trust directly and positively influences the brand affective commitment.

***- The mediation of brand knowledge and brand relationship on the effects of BPP on WoM***

The relation between BPP and WoM is expected to be mediated by the constructs of brand knowledge. This proposition is based on previous branding research (Keller, 1993 and 2003), which finds support on the Theory of Reasoned Action (TRA) (Ajzen and Fishbein, 1980; Fishbein and Ajzen, 1975). TRA states that behaviors of individuals are consistent with their attitudinal antecedent components (Shimp and Kavas, 1984). In social media, TRA has proven as useful to explain consumers' intentional behaviors due to exposure to brand communications (Schivinski and Dabrowski, 2015 and 2016; Schivinsky, Langaro and Shaw, 2019).

In the current study, the attitudinal components of TRA are considered, being suggested that users that are exposed to brand communications in SNS and engage in BPP have their intentions to recommend the brand (behavioral intentions) being positively affected using the effects on brand attitude (attitudinal).

Moreover, the effects on brand attitude are influenced by the increased brand accessibility in consumers' memory due to BPP (Fazio et al., 1989). This effect is captured in our proposition by brand awareness.

Regarding the mediating effects of brand relationship between BPP and WoM, the current research draws upon the literature in consumer-brand relationship, which explores Social Exchange Theory to explain how consumers relate to brands (Fournier, 1998), with brands, and their web representations (e.g., brand page in SNS) being perceived as social actors participating in the social exchange with users (Brown, Broderick and Lee, 2007; Alexandrov and Babakus, 2013).

In this context, WoM is positioned as a currency of exchange that allows the person who is voicing their recommendations to reciprocate towards brands that have offered relationship value (Anderson, 1998; de Matos and Rossi, 2008; Bagozzi, 1974). Previous studies have established that relationship value is captured through its effects on brand trust and affective commitment (de Matos and Rossi, 2008). In the context of SNS, it is expected that as users participate in brand pages (BPP), they have their trust and affective commitment positively impacted. As such, the mediating effects of these constructs are expected to occur as hypothesized:

**H11:** The effects of brand page participation on WoM intentions are mediated by brand awareness, brand attitude (brand knowledge), brand trust, and brand affective commitment (brand relationship).

Fig. 1 depicts the overall structure of the direct and indirect relationships proposed in this study.

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INSERT FIGURE 1 ABOUT HERE  
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## Methodology

### *-Measurement scales*

For the study, a questionnaire was built based on prior literature. *Brand page participation* (BPP) was measured based on Langaro, Rita and Salgueiro (2015), which captures the activities performed in Facebook brand pages, associated to users contributing and creating content (‘Click ‘like’ to posts, photos or videos in the brand page’; ‘Comment the posts published in the brand page’; ‘Share with friends the contents published in the brand page’). Complementarily, measures regarding users’ content consumption were further incorporated in order to capture the multiple components of users’ participation (Muntinga et al., 2011). The items were generated based on findings from qualitative research (Muntinga et al., 2011) and read as follows: “Read brand posts”, “Read others’ comments to brand posts”, “Access video and music links that are posted”.

*The brand attitude* was measured with items aimed at capturing users’ evaluations towards the brand (as in Table 1) (Langaro et al., 2015). The items aimed at measuring *brand awareness* were extracted from Langaro et al., (2015), conciliating measures that captured brand recall and recognisability (see Table 1 for the complete wording of all the items). *Brand trust* was measured using five items (Walsh et al., 2012), capturing brand benevolence and credibility.

*Brand affective commitment* captures users’ identification (“I see the brand as a sort of friend to me”; “I have a strong sense of identification with the brand”) and emotional attachment with the brand (“I like the brand a lot more”) (Fullerton, 2005; Johnson et al., 2006). Finally, *WoM* was measured with items sourced from Harrison-Walker (2001).

The questionnaire was initially prepared in English and then translated into Portuguese by bilingual speakers. In the following phase, it was back-translated to English by other bilingual speakers (e.g., Brady et al., 2005). This was done to check for linguistic and functional aspects properly.

## - *Study Settings, Sampling, and Data Collection*

Portugal was chosen as the research market based on its outperforming penetration regarding Facebook (73 percent of the online population) (Internet World Stats, 2019). Location was used as a filter question. Data were collected among female users of *Facebook Brand Pages* from beauty and personal care type of products. The focus on a specific brand segment aims to avoid potential influences related to combining evaluations and future intentions of distinct categories (Macdonald and Sharp, 2000). This specific sector was chosen because it is considered to be among the most expressive categories in Facebook (Social Bakers, 2019); it has a penetration of 30 percent in the overall population of *Facebook Brand Pages* users, and it is characterized by a higher engagement rate when compared to other categories of consumer product goods. The choice of collecting data only from female users aged 18 to 44 years old is justified by the fact that this segment represents 80 percent of the overall population of users that is active in the *Facebook Brand Pages* used in our study (Facebook, 2019).

Two online surveys were conducted, and two different samples were obtained. The first study was a pretest and was carried out with the primary objective of evaluating the appropriateness of the scales and items used. Cronbach-alpha values were computed to assess the constructs' reliability. Exploratory Factor Analysis (EFA) was conducted (using IBM SPSS 22) to assess constructs' dimensionality. Moreover, Harman's single factor test was used to discard common method bias, as proposed by Podsakoff., MacKenzie, and Lee (2003). Indeed, according to these authors, bias exists and is problematic if EFA indicates a single-factor best represents data.

The second study was meant to validate the measurement properties of the scales and to test the proposed research hypothesis, thus validating the conceptual model represented in Figure 1. The Structural Equation Modeling (SEM) framework was considered, allowing for the simultaneous estimation of direct and indirect effects between latent constructs. LISREL 8.80 (Jöreskog and Sörbom, 2006) was used. Manifest variables were treated as ordinal, and polychoric correlations were computed. The robust maximum likelihood estimation procedure implemented in LISREL was used to deal with the ordinal nature of the variables and estimate all models. Confirmatory factor analysis (CFA) was first used for estimating the measurement model. Following Fornell and Larcker (1981) and Hair et al (2009), the constructs were then validated for

reliability (assessed through composite reliability values larger than 0.7), convergent validity (evaluated by average variance extracted – AVE - values above 0.5) and discriminant validity (assumed when the square root of the AVE for each construct is larger than the correlation between that construct and all the others).

## **Results**

### **- *Pretest***

A valid sample size of 203 respondents was obtained and considered. Measures were validated for their reliability. Indeed, computed Cronbach Alpha values surpass the minimum required level of 0.7 (Nunnally and Bernstein, 1994) for all constructs, namely: brand page participation (0.86), brand attitude (0.96), brand awareness (0.89), brand trust (0.89), brand affective commitment (0.91) and WoM (0.90).

To assess the dimensionality of the constructs an Exploratory Factor Analysis, with Principal Component Analysis as the method of extraction, was conducted. A six-factor solution was considered, accounting for 74 percent of the variance of the 27 initial variables. The estimated factor loadings were inspected: all factor loadings were higher than the minimum recommended values, ranging from 0.64 to 0.84. Each item has loaded according to what was expected.

Moreover, Harman's single factor test was used to assess common method bias. The unrotated single-factor solution was examined to determine the number of factors that are necessary to account for most of the variance of the initial variables. Since the obtained *one* general factor only accounts for 38 percent of the variance, it is possible to conclude there is no evidence of a substantial amount of common method bias. Recall the maximum recommended value is 50 percent (Podsakoff, MacKenzie, and Lee, 2003).

### **- *Main study***

A valid sample of 575 respondents was considered and used in the main study. A measurement model with six correlated factors measured by 27 items was estimated, with the structure previously identified in the pretest and described in detail in Table 1. An acceptable model-data fit was obtained:  $\chi^2 = 525$ ;  $df = 309$ ; RMSEA=0.035; CFI=0.99; NFI=0.99; IFI=0.99; RFI=0.99, (the minimum values recommended in the literature for

model-data are presented in Table 2). The obtained factor loadings, in a standardized solution, presented in Table 1 support constructs' unidimensionality, with loadings above 0.60 for all constructs (Kliver, 1997). Composite reliability (CR) and average variance extracted (AVE) values were computed and are also presented in Table 1. Results all above the minimum recommended values were obtained, indicating reliability and convergent validity of the six constructs in the model.

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INSERT TABLE 1 ABOUT HERE

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Moreover, constructs were analyzed for discriminant validity. The results are presented in Table 3. It is possible to conclude there is discriminant validity among constructs since for each of the six constructs the square root of AVE (on the diagonal) is larger than the correlations between that construct and all the others (off-diagonal elements).

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INSERT TABLE 3 ABOUT HERE  
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***- Hypotheses testing***

Following the measurement model tested in the main study, the global SEM presented in Figure 2 was estimated. An acceptable model-data-fit was obtained, as detailed in Table 4. The coefficient of determination  $R^2$  suggests that the proposed model explains 72 percent of the variability of word-of-mouth.

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INSERT FIGURE 2 ABOUT HERE

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INSERT TABLE 4 ABOUT HERE  
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Overall, results in Table 4 indicate that one standard deviation increase in BPP leads to an overall increase of 0.66 standard deviations on participants' WoM. Furthermore, the two dimensions of *brand relationship* explain the most significant part of this effect. More specifically, *brand relationship* effects are mostly influenced by the direct effects of brand page participation on users' brand trust (standardized coefficient = 0.63) and affective commitment (standardized coefficient = 0.29), accounting for total indirect effects of 0.42 on users' WoM. Complementarily, *brand knowledge* captures the remaining effects, with brand page participation positively affecting brand awareness (standardized coefficient = 0.50) and brand attitude (standardized coefficient = 0.29). These two effects together account for total indirect effects of 0.24 on users' WoM. The comparison of these effects is among the most relevant results to be acknowledged, as it most strongly associates the effectiveness of users' participation in *Facebook brand pages* to brands' ability to foster brand interactions capable of impacting brand trust and affective commitment.

In the following paragraphs, the remaining results that were obtained are discussed in more detail. Research hypotheses H1 to H5 evaluate the effects concerning the *brand knowledge* constructs. The results indicate that users who participate in *Facebook brand pages* are positively influenced on their level of awareness (H1) and attitude towards the brand (H3), as supported in previous studies (Macdonald and Sharp, 2000; Buil et al, 2013; Graham and Havlena, 2007; Niederhoffer et al, 2007). The influence of brand awareness on brand attitude is also accepted (H5), with the effects being potentially related to the impact of awareness on users' brand familiarity and remaining brand associations (Keller, 1993).

Concerning the specific impact on WoM, brand attitude is accepted for its positive effects (H4), derived from attitudes' capacity to energize behaviors (Spears and Singh, 2004). However, the effect of brand awareness on WoM is not significant (H2 is not validated). This result was contextualized given H5, as it could suggest a hierarchy of effects between brand awareness and attitude on influencing WoM (Lavidge and Steiner, 1961). Hence, the mediation of brand attitude on the relationship between brand awareness and WoM was further inspected. Two structural models were compared (Baron and Kenny, 1986). In the first model, the direct effects of awareness on WoM were evaluated (removing all remaining constructs) and a significant positive impact was identified (standardized coefficient = 0.68; t-value=19.85). In the second model, brand attitude was included as a mediator and the relationship between awareness and WoM

was once again inspected. Total mediation was obtained since the direct effects of brand awareness on WoM became non-significant in the second model, with a standardized coefficient and t-value decreasing to 0.12 and 1.70, respectively (Preacher and Hayes, 2004). This result corroborates the hierarchy of effects exerted by brand attitude (Lavidge and Steiner, 1961).

Research hypotheses H6 to H10 evaluate the impact of the *brand relationship* constructs on the relationship between BPP and WoM. All five hypotheses were accepted, corresponding to significant positive effects, as presented in Table 4. Thus, results indicate that users who participate in *Facebook brand pages* are affected by their willingness to rely on the brand (H6) and feel affectively commitment to it (H8). These findings are in line with previous studies that link users' participation to positive relationship consequences (Casaló et al, 2008; Algesheimer et al., 2005; Dholakia and Algesheimer, 2009).

The analysis also reveal the critical influence of brand trust, as the single most expressive construct accounting for direct and indirect effects of BPP on WoM (H6; H7; H10). The prominent role of brand trust is grounded on the understanding that brand recommendations involve personal risks for those who recommend (Mazzarol et al, 2007).

Finally, hypothesis 11 was tested for inspecting the mediation of brand knowledge and brand relationship on the effects of BPP on WoM. For that, two additional structural models were compared using the procedure suggested by Baron and Kenny (1986). In the first model, the direct effects of BPP on WoM were evaluated (removing all remaining constructs) and a significant positive impact was identified (standardized coefficient = 0.60; t-value=13.78). In the second model, the constructs of brand knowledge (awareness and attitude) and relationship (trust and affective commitment) were included as mediators, and the relationship between brand page participation and WoM was once again inspected. Mediation was confirmed since the effects on WoM decreased significantly (standardized coefficient = 0.14; t-value=1.99) (Preacher and Hayes, 2004). These results support the mediation proposed and reveal that despite the fact there is a direct relationship between brand page participation and WoM, this relationship is more strongly explained when the mediation effects of *brand relationship* and *brand knowledge* are simultaneously considered.

Moreover, in order to assess that the results obtained were influenced by BPP and not an artifact of brand liking, multiple group analysis was conducted. Two groups were

compared, based on the responses to the question: “Why have you joined the brand’s page on Facebook?” The respondents were asked to point out the two most important reasons. In total, 246 respondents have justified “because I like the brand.”

These were considered to form one group and were compared with the remaining 329 respondents. A chi-square difference test was used to test for the invariance of the proposed SEM in the two groups. The value of the difference in the test statistics that was obtained was not significant ( $\Delta\chi^2= 8$ ;  $\Delta df=10$ ), thus suggesting the same model holds for the two groups and that previous brand liking of the respondents do not influence the results.

## Conclusions

The purpose of this study was to examine the influence of users’ participation in *Facebook Brand Pages* on WoM intentions, evaluating the triggers that mediate these effects.

Prior studies argued that users’ participation in SNS had a positive effect on the intentions to recommend the brand (Jahn and Kunz, 2012). Our study, else than confirming these findings, also reveals that these effects are largely explained by the mediation of *brand knowledge* and *brand relationship* and the simultaneous effects of users’ brand page participation.

More specifically, the findings suggest that the effects of users’ brand page participation on WoM occur when brands manage to evoke users’ needs for reciprocation, with an impact on trust and affective commitment; and simultaneously reinforce brands’ associations, with impact on awareness and attitude.

While evaluating the extent of mediating effects, *brand relationship* constructs have a predominant effect on WoM, with brand trust occupying a pivotal role. The prominent effects of *brand relationship* on WoM could initially suggest that *Facebook brand pages* are especially skilled in building relational values with consumers. However, the analysis of the direct paths between brand page participation and all remaining constructs (brand awareness, attitude, trust and affective commitment) reveals that the direct effects are very much comparable. Therefore, the findings suggest that *Facebook brand pages* are capable of building brand relationship and knowledge simultaneously. However, because the effects of brand awareness on WoM occurs exclusively through

the mediation of brand attitude and not directly, the effects of brand knowledge on WoM becomes comparably less prominent. This result finds support in previous studies (Lavidge and Steiner, 1961; Smith et al., 2008) where brand awareness is acknowledged as not directly affecting the conative stages of consumer decisions.

These findings have several managerial implications, among them the positioning of brand page participation as a critical measure to be pursued by brands in their *Facebook brand pages*. Moreover, the understanding that while evoking participation brands can simultaneously impact brand relationship and knowledge dimensions, with the former one being more prominent in generating WoM intentions.

Furthermore, the pivotal role of *brand trust challenges companies to position it at the core objectives to be pursued in Facebook brand pages*. In order to maximize the relational values associated to trust, brands may further explore opportunities for improving users' perceptions towards brands' credibility and benevolence, through initiatives associated to *i) clarifying uncertainties towards the product/category, ii) evoking brands' expertise and iii) continuously involving users in the context of brand altruism and generosity associated with benefits being offered with no monetary costs directly associated* (Bhattacharjee, 2002; Anderson, 2010). Furthermore, given the importance that brand trust assumes in the model, companies else than planning initiatives that positively impact brand trust, are also challenged to get equipped with strategies capable of controlling for the potential damages to trust. *Bulletproof strategies* should be designed to guide the organization on clear ethical principles, to assure that users' privacy is protected, to foster transparency and to provide a clear set of norms and best practices for coping with crisis and stimulating positive interactions.

### **- *Limitations and Future Research***

The results of the current study need to be contextualized within the limitations imposed by the research design, namely: the focus on beauty and personal care categories and the choice of popular brands. In this sense, future studies could expand the analysis through cross-segment studies, with findings being investigated for potential influences related to the brands' segment, their popularity, and users' demographics. Furthermore, the current study focuses on the positive effects of BPP, as they reflect the dominant perspective of previous studies in the area of brand communities, social media, and SNS.

Thus, future studies could profit from exploring the effect associated with users' *negative* WoM and brands' related mismanagements. Another suggestion is that, since brand trust has a key role in WoM, future studies could further evaluate the antecedents of trust that are more specifically related to *Facebook brand pages*, concerning, for instance, the *digital brand assets offer*. Indeed very little is known about the implications of brands offering free benefits in SNS. Finally, as our study develops an integrated perspective regarding users who join brand pages at Facebook, future studies could compare results with offline relations, regarding users who do not integrate brand pages or integrate different social media platforms.

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Figure 1: Conceptual Model and Research Hypotheses

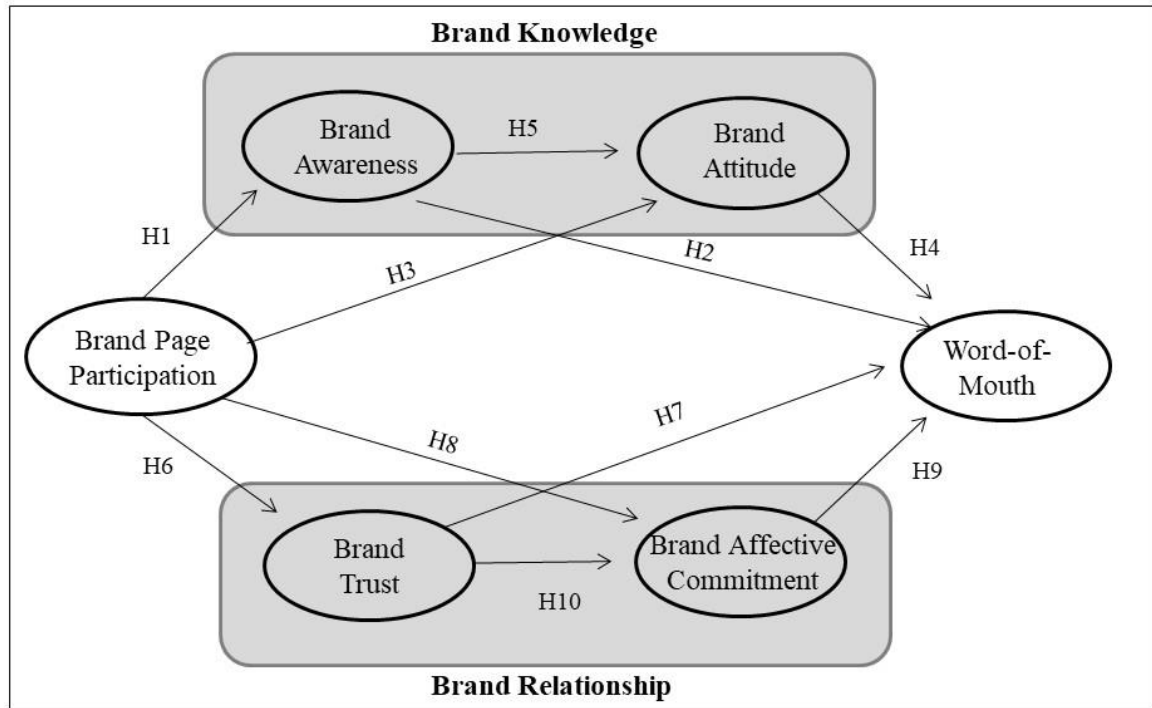


Figure 2: Estimates for the direct effects in a standardized solution (t-values)

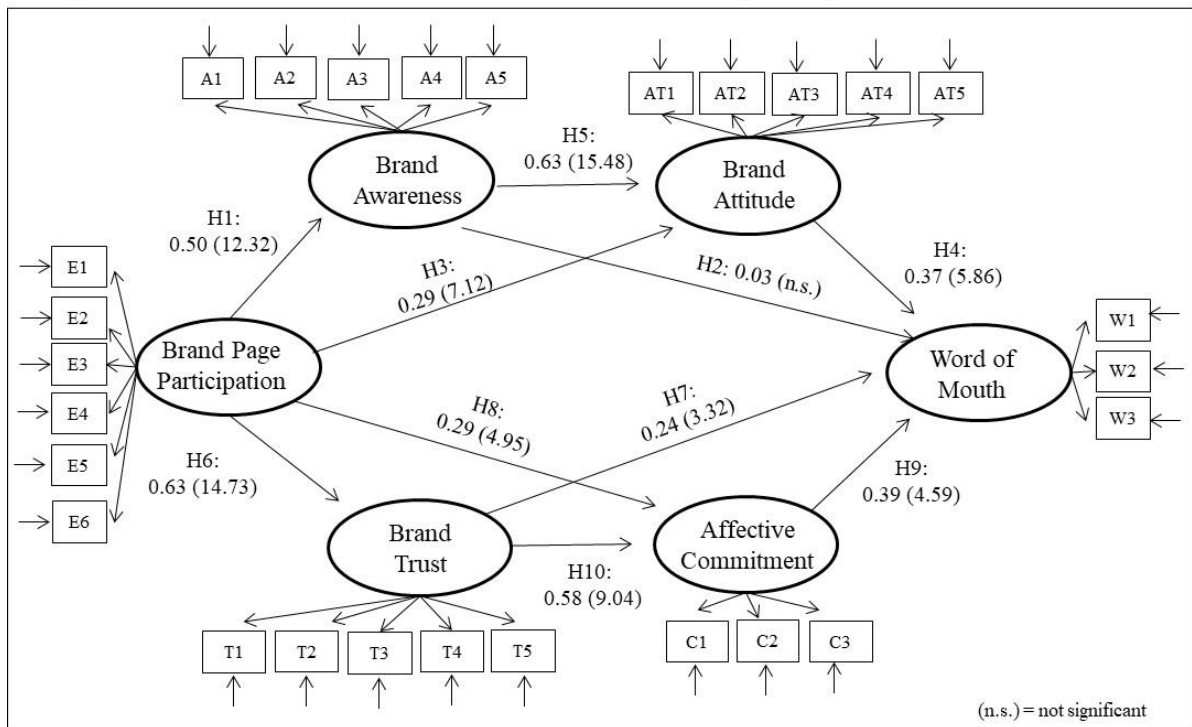


Table 1: Results from confirmatory factor analysis

		Standardized		
		Factor	CR	AVE
		Loading		
<b>Brand Page Participation (BPP)</b>			0.87	0.54
E1	Read brand posts on the brand page	0.62		
E2	Click 'like' to posts, photos or videos on the brand page	0.67		
E3	Access video and music links that are posted on brand pages	0.72		
E4	Comment the posts published on the brand page	0.86		
E5	Share with friends the content published on the brand page	0.81		
E6	Read other's comments on the brand posts	0.71		
<b>Brand Trust</b>			0.93	0.74
T1	I rely on the quality of brand's products	0.86		
T2	I rely on brand's efforts to help me	0.86		
T3	I recognize brand's good intentions	0.88		
T4	I recognize brand's large experience in its area	0.83		
T5	I rely on the brand's promises	0.87		
<b>Brand Affect. Commitment</b>			0.85	0.65
C1	I see the brand as a sort of friend to me	0.71		
C2	I have a strong sense of identification with the brand	0.87		
C3	I like the brand a lot more	0.82		
<b>Brand Awareness</b>			0.93	0.72
A1	I recognize its characteristics	0.83		
A2	I recall its advertising	0.81		
A3	I remember the brand more often	0.77		
A4	I easily describe the brand to a friend	0.90		
A5	I feel familiar with its products	0.92		
<b>Brand Attitude</b>			0.96	0.82
AT1	More favorable	0.90		
AT2	More appealing	0.87		
AT3	Better	0.92		
AT4	More pleasant	0.93		
AT5	More likable	0.92		
<b>Word-of-mouth (WOM)</b>			0.91	0.76
W1	I mention the brand to others quite frequently	0.88		
W2	I will recommend the brand more often than any other brand in its category	0.85		
W3	I will talk positively about the brand	0.89		

All items were all measured on a seven-point scale. The construct of BPP was measured based on frequency.

Table 2: Minimum recommended values for model-data fit measures

	Min.	Description
<b>Criteria for global structural model and CFA</b>		
CFI	>0.95*	Comparative Fit Index
RMSEA	<0.08*	Root Mean Square Error of Approximation
NFI	>0.95*	Normed Fit Index
IFI	>0.95*	Incremental Fit Index
RFI	>0.95*	Relative Fit Index
<b>Criteria for constructs</b>		
CR**	>0.70**	Compositive of reliability
AVE***	>0.50***	Average variance extracted
$\sqrt{AVE}$	>correl. between one construct and all others	Discriminant validity
<b>Criteria to evaluate the effects</b>		
t-value	>2	Level of significance
SC	Closer to 1	Standardized Coefficient
<b>Others</b>		
R <sup>2</sup>	Closer to 1	Coefficient of determination

\* Schumacker and Lomax, 2010

\*\* Hair, Black, Babin and Anderson 2009

\*\*\* Fornell and Larker, 1981

Table 3: Inter-construct Correlations and square root of AVE

	Awareness	Attitude	Trust	Affect. Commit.	WOM	BPP
Awareness	<b>0.85</b>					
Attitude	0.78	<b>0.91</b>				
Trust	0.31	0.38	<b>0.86</b>			
Affect. Commit.	0.32	0.39	0.76	<b>0.81</b>		
WOM	0.55	0.67	0.70	0.72	<b>0.87</b>	
Brand page participation (BPP)	0.50	0.61	0.63	0.65	0.71	<b>0.73</b>

Table 4: Results of hypotheses testing, total and indirect effects and model data-fit for the global structural model

Hypothesis		Standardized Coefficient	T-Values	Hypothesis support
H1: BPP	→ Brand Awareness	0.50	12.32	Accepted
H2: Brand Awareness	→ WOM	0.03	0.54	Rejected
H3: BPP	→ Brand Attitude	0.29	7.12	Accepted
H4: Brand Attitude	→ WOM	0.37	5.86	Accepted
H5: Brand Awareness	→ Brand Attitude	0.63	15.45	Accepted
H6: BPP	→ Brand trust	0.63	14.73	Accepted
H7: Brand trust	→ WOM	0.24	3.32	Accepted
H8: BPP	→ Brand Affect. Commit	0.29	4.95	Accepted
H9: Brand Affect. Commit.	→ WOM	0.39	4.59	Accepted
H10: Brand Trust	→ Brand Affect. Commit.	0.58	9.04	Accepted
<i>Total and indirect effects</i>				
Total Effects	BPP → WOM	0.66	14.98	
	BPP → Brand-Knowledge (Awareness and Attitude) → WOM *	0.24		
	BPP → Brand-Relationship (Trust and Affective Commitment) → WOM **	0.42		
Model data-fit for Global Model $\chi^2 = 746$ df= 314; RMSEA=0.049; CFI=0.99; NFI=0.99; IFI=0.99; RFI=0.99				

\* the sum of the products of standardized coefficients obtained in brand-knowledge paths

\*\* the sum of the products of standardized coefficients obtained in brand-relationship paths